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ABSTRACT

The Methodology Inventory is a 76-item 4-point measure divided into eight scales designed to determine what behaviors a teacher engages in while teaching. The eight scales are stimuli for writing, prewriting, writing, revising/editing, evaluation, language development, varieties of discourse, and publication of written work. The instrument was administered over a 3-year period to 104 English language arts teachers who were participants in various writing project summer workshops. An item analysis of the results was performed to determine (1) the reliability of the total instrument, (2) the reliability of items within each scale, and (3) the intercorrelation among scores on the scales. Results showed that the instrument as a whole had a high reliability coefficient and that each of its eight scales was internally consistent. Low to moderate intercorrelations among the scales suggested that there was a commonality that cut across the scales; yet the commonality was not so large as to suggest that the scales were not somewhat independent of each other. (Extensive tables of data and a copy of the instrument are appended.) (FL)

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THE RELIABILITY OF THE METHODOLOGY INVENTORY

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With the proliferation of staff development projects in English, particularly composition, it becomes necessary to evaluate the impact of these programs on the teachers who participate in them. One way is by assessing teacher attitudes toward instruction. One way of assessing attitudes is to determine what behaviors a teacher engages in while teaching writing. Such an inventory of behavior was developed by Donlan (1979), an instrument called The Methodology Inventory. The Inventory was originally a 70-item 4-point measure subdivided into seven scales: (1) stimuli for writing, (2) prewriting, (3) writing, (4) revising/editing, (5) evaluation, (6) language development, and (7) miscellaneous. The instrument was sent to a panel of judges, experts in the teaching of composition, who were to respond to 5 questions:

1. Were the definitions given with the 4-point scale adequate?
2. Taken together, were the categories a comprehensive assessment of what teachers do by way of teaching writing?
3. Was each category complete?
4. What items should be deleted or added?
5. Should the items remain in categories or be scrambled?

Based on the judges' suggestions, (1) items were dropped, (2) items were added, (3) items were transferred to other categories, and the

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scale called "miscellaneous" was replaced by 2 scales--"Varieties of Discourse" and "Publication of Written Work." The resulting inventory contained 76 items, subdivided into 8 scales.

Having thus achieved face validity, the instrument was administered over a period of three years to 104 English language arts teachers. These were teachers who had been admitted to local writing project summer workshops. An item analysis was performed to determine (1) the reliability of the total instrument, (2) the reliability of items within each scale, and (3) the intercorrelation among scores on the Inventory's eight scales.

Reliabilty of the total scale

Based on the sample of 104 teachers, mean scores and standard deviations were obtained and test reliability was calculated for each of the 76 items. Three estimates of reliability were administered. The Cronbach Alpha yielded an overall reliability of .93. Hoyt yielded a reliability of .90 without the effects of items removed and .93 with the effects of items removed. Testing for split-half reliability (Helmstadter) corrected with Spearman-Brown yielded .95 reliability; when corrected with Guttmans, a .95 reliability.

The reliability of items within each scale (internal consistency)

A mean score for each item in each scale was correlated with the total scale minus the item, using Pearson's correlation coefficient. Table 1 lists the items in each one of these scales. Items with

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Insert Table 1 about here

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of these scales. Items with correlations at or below .20 were eliminated from the scale (after Schuessler, Gere, and Abbott, 1981).

After the determination of the correlation of each item within a scale to the total scale minus the item the reliability of each scale was estimated. Table 2 shows the number of items, means, standard

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Insert Table 2 about here

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deviations, coefficient alpha and split-half (corrected) reliability coefficients for eight scales of the Methodology Inventory.

As Table 2 indicates, each of the 8 scales has a reasonably high reliability, even scales with small numbers of items (e.g., Scales 3, 7, and 8).

Intercorrelations among the scales

Scores on each of these eight scales were intercorrelated and are shown in Table 3. This was to determine the degree of independence

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Insert Table 3 about here

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the scales had.

As shown in Table 3, the intercorrelations range between .13 and .65, a range from low to moderate. The lowest intercorrelation exists between stimuli for writing and revising/editing (.13). Since the square of the intercorrelation equals the percentage of shared variance, the shared variance is only 1.6%. In effect, the process of stimulating the student to write is fairly independent of the process

of revising/editing as measured by these scales. On the other hand, the highest intercorrelation is between revising/editing and evaluation (.65); this intercorrelation is to be expected, since students frequently revise papers after they have been evaluated. Yet, even the shared variance between these two categories is only 42%, the moderate intercorrelations suggest two aspects of the Methodology Inventory: (1) The Methodology Inventory seems to be measuring a common element in the teaching of composition that cuts across the eight scales; but (2) the limited shared variance between scales suggests a high degree of independence of the eight scales. As a result, the Methodology Inventory could be considered a multi-dimensional measure.

Conclusion

Based on the analysis of data from a sample of 104 teachers, the instrument as a whole has a high reliability coefficient. In addition, each of the instrument's 8 scales is internally consistent. Also, the low to moderate intercorrelations among the scales suggest there is a commonality that cuts across the eight scales; yet this commonality is not so large as to suggest that the scales are not somewhat independent of one another. As the teaching of composition is a multidimensional process, the Methodology Inventory, as has been shown, can reliably measure these dimensions.

References

Donlan, D. A methodology inventory for composition education. English Education, 1979, 11, 23-31.

Shuessler, B. F., Gere, A. R., & Abbott, R. D. The development of scales measuring teacher attitudes toward instruction in written composition: A preliminary investigation. Research in the Teaching of English, 1981, 15, 55-63.

Table 1

Items in each sub-category, Mean (M) and Standard Deviation (SD) of item responses, and the Correlation (r) between the item and the scale excluding the item (*Item subsequently deleted)

M	SD	r	Item
			Scale 1. Stimuli for Writing
2.33	.99	.27	1. Before students begin writing, I show a film to give them some ideas.
2.34	.88	.57	2. Before students begin writing, I play music or spoken recording to give them some ideas.
3.05	.92	.39	3. Before students begin writing, I provide concrete objects (realia) to give them some ideas.
2.15	1.11	.42	4. Before students begin writing, I engage the class in creative dramatics.
3.03	.89	.54	5. Before students begin writing, I show them pictures to give them ideas.
2.11	1.05	.40	6. Before students begin writing, I take them outside of the classroom to make observations of the world around them.
1.86	.83	.32	7. Before students begin writing, I have them watch television to get ideas.
1.40	.70	.30	8. Before students begin writing, I have them listen to the radio to get ideas.
1.64	.77	.45	9. Before students begin writing, I have them listen to guest speakers who can provide them with ideas for writing.
3.41	.87	.35	10. Before students begin writing, I have them read stories, poetry, or plays to get ideas for writing.
3.01	1.00	.29	11. Before students begin writing, I have them read nonfiction (e.g., essays, articles, newspapers, magazines) to get ideas for writing.
1.85	.95	.51	12. Before students begin writing, I have them engage in game playing.

Table 1 (Cont.)

Scale 2. Prewriting

M	SD	r	Item
*2.41	1.01	.20	1. Before students begin to write, I engage them in self-awareness exercises, such as compiling a sensory checklist.
3.10	.93	.27	2. Before students begin to write, I have them compile word lists that they might draw on while writing.
2.77	1.10	.36	3. Before students begin to write, I have them engage in outlining or comparable organizational schemes.
3.48	.76	.41	4. Before students begin to write, I engage the class as a whole in preparatory discussion of a directive nature.
2.95	.94	.39	5. Before students begin to write, I engage the class as a whole in prepartory discussion of a nondirective nature.
2.38	.97	.48	6. Before students begin to write, I have them meet in small groups in preparatory discussion.
2.74	1.07	.27	7. Before students begin to write, I have individual conferences with some of them in which we discuss the assignment.
2.49	1.25	.35	8. Before students begin to write a formal assignment, I engage them in diary, journal, or log writing from which they can draw ideas.
3.43	.82	.42	9. On a given assignment I provide students with a variety of topics from which to choose.
2.69	1.01	.44	10. On a given assignment I provide students with a variety of writing types they may use.

Table 1 (Cont.)

Scale 3. Writing

M	SD	r	Item
*3.68	.56	.13	1. I have my students write in class under my supervision.
3.76	.62	.33	2. While students are writing, I move around the classroom volunteering assistance.
2.37	1.12	.33	3. While students are writing, I schedule intermittent discussions about work in progress, engaging the entire class in the discussion.
2.12	1.13	.59	4. While students are writing, I schedule intermittent small group discussions about work in progress.
2.77	1.06	.46	5. While students are writing, I have them share work in progress by reviewing each other's papers.
2.30	1.01	.30	6. I write the assignments right along with the students.
1.88	1.04	.39	7. I have students put writing in progress on the board, on overhead projector, or on opaque projector for entire class or small group discussion.
2.21	1.08	.44	8. I duplicate students' writing in progress for entire class or small group discussion.
2.49	1.01	.33	9. I have my students write for non-school purposes.

Table 1 (Cont.)

Scale 4. Revising/Editing

M	SD	r	Item
3.07	.94	.58	1. I require a second or otherwise final draft of each student.
3.31	.90	.40	2. I read the first (rough) draft before each student revises it.
3.11	1.01	.36	3. I correct and otherwise evaluate the first (rough) draft before each student revises it.
2.58	.96	.42	4. I have students evaluate their own rough drafts without help from me or other students.
2.60	1.14	.47	5. I have students revise their own rough drafts in conjunction with student editing committees, small group peer evaluation, or some other form of student to student conferencing.
2.82	1.24	.53	6. I require that students submit their rough draft(s) along with their finished draft.

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Table 1 (Cont.)

Scale 5. Evaluation

M	SD	r	Item
3.58	.66	.27	1. Students are evaluated on the basis of criteria I have established.
2.01	.99	.31	2. Students are evaluated on the basis of criteria they have established.
2.53	1.13	.25	3. Students are evaluated on the basis of criteria arrived at jointly between them and me.
3.58	.78	.31	4. I write a general comment to the student about the paper; the comment appears either at the beginning or at the end of the paper.
3.34	.99	.58	5. To the student, I make marginal comments that refer to spejcific aspects of a paper--a phrase, a sentence, a paragraph, an idea, etc.
2.72	1.04	.43	6. I rewrite parts of student papers; specifically, I show students how they might have written a phrase, a sentence, or a paragraph more effectively.
2.77	.97	.24	7. I indicate errors without correcting them.
*1.60	.85	-.08	8. I neither indicate nor correct errors.
2.00	1.10	.35	9. I use small groups of students to evaluate writing.
2.91	1.18	.54	10. I assign grades to writing assignments.
2.50	1.21	.24	11. I assign a single grade which represents a combined evaluation of content and form.
2.31	1.26	.47	12. I assign a split grade; one grade for content, the other for form.
1.63	.88	.28	13. I grade on content only.
1.50	.78	.28	14. I grade on form only.
1.90	.84	.35	15. I let students grade themselves.

Table 1 (Cont.)

Scale 5. Evaluation (Cont.)

M	SD	r	Item
1.88	.96	.56	16. I let students grade each other's writing assignments.
3.32	.98	.29	17. I have students keep cumulative folders containing their writing.
2.56	1.15	.54	18. I help students with writing assignments from other classes.
1.85	.87	.34	19. I assign writing strictly for purposes of diagnosis.

Table 1 (Cont.)

Scale 6. Language Development

M	SD	r		Item
3.25	.94	.31	1.	I teach formal grammar between writing assignments.
3.50	.74	.47	2.	I teach usage between writing assignments, concentrating on those problems students have exhibited on the previous assignment.
*2.61	.93	.18	3.	I teach usage between writing assignments, but not directly related to usage problems students have exhibited on previous assignments.
2.85	.99	.52	4.	Between writing assignments, I have students engage in sentence-combining exercises.
1.89	1.03	.47	5.	Between writing assignments, I have students generate sentences that model those of respected writers.
2.70	1.00	.61	6.	Between writing assignments, I have students engage in exercises involving semantics: connotation, denotation, figurative language.
2.27	1.05	.53	7.	Between writing assignments, I have students engage in paraphrasing other writer's language.
2.04	.97	.46	8.	Between writing assignments, I have students model sentences and paragraphs that other writers have created.
*3.29	.89	.16	9.	Between writing assignments I engage the students in oral language activities, e.g., dramatics, discussion, problem solving.
2.33	1.03	.45	10.	Between assignments, I perform linguistic analysis of student sentences, i.e., for syntax, semantics, rhetoric.

Table 1 (Cont.)

Scale 7. Varieties of Discourse

M	SD	r	Item
3.18	.86	.49	1. I have students engage in narrative writing.
3.35	.88	.46	2. I have students engage in expository writing.
3.01	.98	.44	3. I have students engage in report writing.
2.54	1.07	.53	4. I have students engage in argumentative and persuasive writing.
2.87	1.01	.37	5. I have students write poetry.
2.41	1.11	.53	6. I have students write drama: e.g., skits, short plays.

Scale 8. Publication of Written Work

M	SD	r	Item
3.21	1.04	.26	1. I place student writing on display in the classroom.
3.24	1.26	.56	2. I publish classroom anthologies of student writing.
2.31	1.28	.46	3. I submit student writing to school literary magazines.
2.02	1.7	.41	4. I submit student writing to local, state, or national writing contests.

Table 2

Number of items (N), Means (M), and Standard Deviations (SD), coefficient alpha and split-half (corrected) reliability coefficients for eight scales of the methodology inventory.

Scale Name	N	M	SD	Alpha	S-H
1. Stimuli for Writing	12	28.2	5.8	.76	.81
2. Prewriting	10	28.4	5.1	.69	.73
3. Writing	9	25.8	4.8	.70	.81
4. Revising/Editing	6	17.5	4.0	.72	.78
5. Evaluation	19	46.5	8.4	.78	.85
6. Language Development	10	26.8	5.3	.75	.78
7. Varieties of Discourse	6	17.4	3.9	.73	.71
8. Publication	4	9.8	3.2	.64	.76

Table 3

Intercorrelation among scores on eight scales
of the Methodology Inventory

	1	2	3	4	5	6	7	8
1		.58	.53	.13	.29	.43	.47	.50
2			.60	.42	.56	.48	.56	.42
3				.48	.55	.37	.55	.50
4					.65	.40	.52	.25
5						.44	.57	.35
6							.46	.34
7								.48
8								

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Methodology Inventory*

(as revised May 20, 1981)

INSTRUCTIONS: In preparation for your possible participation in the Inland Area Writing Project, the organizational committee would like to plan a program based upon your experiences this past year in the teaching of written composition. Please read each item carefully and check the appropriate box: A (I performed this activity frequently this past year), B (I performed this activity occasionally this past year), C (I performed this activity infrequently this past year), and D (I didn't perform this activity this past year).

Stimuli for Writing

	A	B	C	D
1. Before students begin writing, I show a film to give them some ideas.				
2. Before students begin writing, I play music or spoken recordings to give them some ideas.				
3. Before students begin writing, I provide concrete objects (realia) to give them some ideas.				
4. Before students begin writing, I engage the class in creative dramatics.				
5. Before students begin writing, I show them pictures to give them ideas.				
6. Before students begin writing, I take them outside of the classroom to make observations of the world around them.				
7. Before students begin writing, I have them watch television to get ideas.				
8. Before students begin writing, I have them listen to the radio to get ideas.				
9. Before students begin writing, I have them listen to guest speakers who can provide them with ideas for writing.				
10. Before students begin writing, I have them read stories, poetry, or plays to get ideas for writing.				
11. Before students begin writing, I have them read nonfiction (e.g., essays, articles, newspapers, magazines) to get ideas for writing.				
12. Before students begin writing, I have them engage in game playing.				

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Prewriting

1. Before students begin to write, I have them compile word lists that they might draw on while writing.

2. Before students begin to write, I have them engage in outlining or comparable organizational schemes.

3. Before students begin to write, I engage the class as a whole in preparatory discussion of a directive nature.

4. Before students begin to write, I engage the class as a whole in preparatory discussion of a nondirective nature.

5. Before students begin to write, I have them meet in small groups in preparatory discussion.

6. Before students begin to write, I have individual conferences with some of them in which we discuss the assignment.

7. Before students begin to write a formal assignment, I engage them in diary, journal, or log writing from which they can draw ideas.

8. On a given assignment I provide students with a variety of topics from which to choose.

9. On a given assignment I provide students with a variety of writing types they may use.

A	B	C	D

Writing

1. While students are writing, I move around the classroom volunteering assistance.

2. While students are writing, I schedule intermittent discussions about work in progress, engaging the entire class in the discussion.

3. While students are writing, I schedule intermittent small group discussions about work in progress.

4. While students are writing, I have them share work in progress by reviewing each other's papers.

5. I write the assignments right along with the students.

6. I have students put writing in progress on the board, on overhead projector, or on opaque projector for entire class or small group discussion.

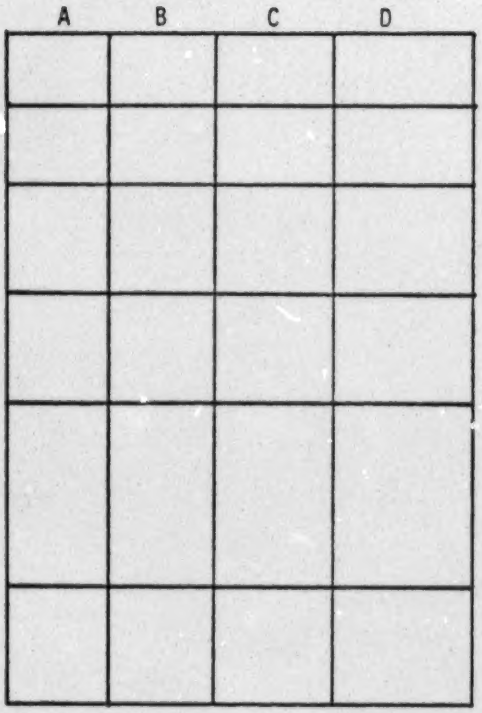
7. I duplicate students' writing in progress for entire class or small group discussion.

8. I have my students write for non-school purposes.

A	B	C	D

Revising/Editing

1. I require a second or otherwise final draft of each student.
2. I read the first (rough) draft before each student revises it.
3. I correct and otherwise evaluate the first (rough) draft before each student revises it.
4. I have students evaluate their own rough drafts without help from me or other students.
5. I have students revise their own rough drafts in conjunction with student editing committees, small group peer evaluation, or some other from of student-to-student conferencing.
6. I require that students submit their rough draft(s) along with their finished draft.



Evaluation

	A	B	C	D
1. Students are evaluated on the basis of criteria I have established.				
2. Students are evaluated on the basis of criteria they have established.				
3. Students are evaluated on the basis of criteria arrived at jointly between them and me.				
4. I write a general comment to the student about the paper; the comment appears either at the beginning or at the end of the paper.				
5. To the student, I make marginal comments that refer to specific aspects of a paper--a phrase, a sentence, a paragraph, etc.				
6. I rewrite parts of student papers; specifically, I show students how they might have written a phrase, a sentence or a paragraph more effectively.				
7. I indicate errors without correcting them.				
8. I use small groups of students to evaluate writing.				
9. I assign grades to writing assignments.				
10. I assign a single grade which represents a combined evaluation of content and form.				
11. I assign a split grade: one grade for content, the other for form.				
12. I grade on content only.				
13. I grade on form only.				
14. I let students grade themselves.				
15. I let students grade each other's writing assignments.				

Evaluation (cont.)

16. I have students keep cumulative folders containing their writing.

17. I help students with writing assignments from other classes.

18. I assign writing strictly for purposes of diagnosis.

A	B	C	D

Language Development

	A	B	C	D
1. I teach formal grammar between writing assignments.				
2. I teach usage between writing assignments, concentrating on those problems students have exhibited on the previous assignment.				
3. Between writing assignments, I have students engage in sentence-combining exercises.				
4. Between writing assignments, I have students generate sentences that model those of respected writers.				
5. Between writing assignments, I have students engage in exercises involving semantics: connotation, denotation, figurative language.				
6. Between writing assignments, I have students engage in paraphrasing other writers' language.				
7. Between writing assignments, I have students model sentences and paragraphs that other writers have created.				
8. Between assignments, I perform linguistic analysis of student sentences, i.e., for syntax, semantics, rhetoric.				

Varieties of Discourse

1. I have students engage in narrative writing.
2. I have students engage in expository writing.
3. I have students engage in report writing.
4. I have students engage in argumentative and persuasive writing.
5. I have students write poetry.
6. I have students write drama: e.g., skits, short plays.

A	B	C	D

Publication of Written Work

1. I place student writing on display in the classroom.

2. I publish classroom anthologies of student writing.

3. I submit student writing to school literary magazines.

4. I submit student writing to local, state, or national writing contests.

A	B	C	D